

Remarks

This Reply is in response to the Final Office Action mailed December 2, 2008.

I. Summary of Examiner's Rejections

Prior to the Office Action mailed December 2, 2008, Claims 1, 3-11 and 21-32 were pending in the Application. In the Office Action, Claims 1, 21-22 and 26-32 were rejected under 35 U.S.C. 103(a) as being unpatentable over Toklu et al. (6549643, referred to as "Tok" herein) in view of Martino et al. (6473095, referred to as "Mar" herein) and in further view of Foote et al. (2003/0161396, referred to as "Foo" herein). Claims 3-11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Tok in view of Mar in view of Foo and in further view of Hanson et al. (2002/0038456, referred to as "Hansen" herein). Claims 23-25 were objected to as being dependent upon a rejected claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

II. Summary of Applicant's Amendments

The present Reply amends claims 1, 21 and 23-25; all as shown above. Applicants respectfully reserve the right to prosecute any originally presented or canceled claims in a continuing or future application.

III. Objected to Claims

In the Office Action mailed December 2, 2008, Claims 23-25 were objected to as being dependent upon a rejected claim. However, it was also indicated that they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants have amended Claims 23-25 in independent form to include all of the limitations of the base claim and any intervening claims. In view of the amendments made to Claims 23-25, it is respectfully submitted that these claims are now allowable.

IV. Claim Rejections Under 35 U.S.C. § 103

In the Office Action mailed December 2, 2008, claims 1, 21-22 and 26-32 were rejected under 35 U.S.C. 103(a) as being unpatentable over Tok, in view of Mar, and in further view of Foo. Claims 3-11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Tok in view of Mar in view of Foo and in further view of Hanson.

Claim 1

Claim 1 has been amended by the current Reply to more clearly define the embodiment therein. As amended, Claim 1 defines:

1. A method for discriminatively selecting keyframes representative of segments of a source digital media, comprising the steps of:
 - obtaining said source digital media for which keyframes are to be selected, wherein said source digital media comprises a plurality of segments, wherein said plurality of segments comprises a plurality of frames, said plurality of frames comprising candidate keyframes;
 - pre-processing said source digital media to obtain a plurality of feature vectors, said feature vectors being representative of the candidate keyframes;
 - determining in-class similarity values for said candidate keyframes, wherein the in-class similarity values are determined by comparing the feature vectors for the candidate keyframes to other feature vectors found solely within the same segment the candidate keyframes come from;
 - determining out-of-class similarity values for said candidate keyframes, wherein the out-of-class similarity values are determined by comparing the feature vectors for the candidate keyframes to other feature vectors found solely outside of the segment the candidate keyframes come from;
 - discriminatively selecting a keyframe for each segment based on both the in-class similarity values and the out-of-class similarity values of the candidate keyframes, wherein each selected keyframe is both representative of the segment the selected keyframe originates from and distinguishable from other selected keyframes which are representative of the remaining plurality of segments, wherein each of the selected keyframes are presented in chronological order as they appear within the source digital media; and
 - wherein the chronological order of the selected keyframes as they appear within the source digital media is maintained during the step of discriminatively selecting a keyframe for each segment.

The invention embodied in Claim 1 is not obvious over Tok, in view of Mar, and further in view of Foo, among other things, for the following reasons. In the Office Action, it was set forth that Mar discloses the use of out-of-class similarity values to select keyframes. It was stated that in Mar, “The bins represent key frames outside the class. This way the bin placement of the candidate key frame is distinguished from each of the other bins. For example, when no bin matches, the system will create a new bin for the candidate key frame.”

One of the ways that the invention disclosed in Mar is distinguishable from the invention claimed in Claim 1 is the fact that when candidate key frames are grouped together in Mar, they are grouped together without any regard for the time order that the candidate key frames appear in the original source digital media. For example, looking at Fig. 3 of Mar, histograms H1 and H4 have

been grouped together while histograms H3 and H5 were grouped together. Accordingly, the candidate keyframe associated with H4 will be presented before the candidate keyframe associated with H3 is presented. By simply dumping all of the similar candidate keyframes into the same bin without any regard to chronological order, the usefulness of the method disclosed in Mar is limited.

Claim 1 has been amended to more clearly defined this embodiment of the invention by setting forth that the chronological order of the selected keyframes as they appear within the source digital media is maintained during the step of discriminatively selecting a keyframe for each segment. This is the manner in which the keyframes were presented in Fig. 6B. The Mar reference, by utilizing the concept of bins having all similar candidate keyframes grouped together regardless of when they are presented in the source media, teaches away from the invention set forth in Claim 1 as amended.

It is therefore respectfully submitted that Claim 1 as amended is not anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

Claim 21

Independent Claim 21 has been amended similar to Claim 1 to more clearly define the embodiment therein and the comments provided for Claim 1 above are incorporated by reference herein. In view of the comments provided above for Claim 1, Applicants' representative respectfully submits that the embodiment defined by Claim 21 is neither anticipated by, nor obvious in view of the cited reference, and reconsideration thereof is respectfully requested.

Claims 3-11, 21-22 and 26-32

Claims 3-11, 21-22 and 26-32 are not addressed separately but it is respectfully submitted that those claims are allowable as depending from an allowable independent claims and further in view of the comments provided above. Applicants respectfully submit that those claims are similarly neither anticipated by, nor obvious in view of the cited reference, and reconsideration thereof is respectfully requested. It is also submitted that those claims also add their own limitations which renders them patentable in their own right. Applicants respectfully reserve the right to argue these limitations should it become necessary in the future.

VI. Conclusion

In view of the above amendments and remarks set forth above, it is respectfully submitted

that all of the claims now pending in the subject patent application should be allowable, and reconsideration thereof is respectfully requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

Enclosed is a PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. §1.136 for extending the time to respond up to and including April 2, 2009.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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By: /Rex Hwang/
Rex Hwang
Reg. No. 56206

Customer No. 23910
FLIESLER MEYER LLP
650 California Street, 14th Floor
San Francisco, California 94108
Telephone: (415) 362-3800